EXECUTIVE SUMMARY

ES.1 BACKGROUND

The District of Columbia Motor Carrier Management and Threat Assessment Study provides a detailed analysis of current motor carrier activity in the District of Columbia (the District), an outline of the truck traffic concerns of stakeholder groups, and a framework for the creation of a comprehensive motor carrier management program. The District Department of Transportation (DDOT) has commissioned the U.S. Department of Transportation's (DOT) Volpe National Transportation Systems Center (Volpe) in Cambridge, Massachusetts, to conduct the study.

Through the implementation of recommendations from this study, DDOT hopes to:

- Reduce truck traffic on residential streets
- Reduce congestion due to truck traffic and truck loading/unloading activities
- Provide better information and services to truck operators
- Address truck-related security concerns

This study does not address individual location-specific problems. Rather, it takes a larger view of truck issues and recommends an overall truck management program that can be used to address specific complaints and problem locations.

ES.2 METHODOLOGY AND ORGANIZATION

Volpe conducted extensive research on motor carrier operations in the District. For truck counts, this study uses the best available existing data. Research included gathering and analyzing existing data on truck traffic in the District, collecting and analyzing new data for a pilot truck parking study, collecting qualitative data through visual inspections of key locations and neighborhoods, and interviewing relevant stakeholders representing businesses, residents, government agencies, public safety and security agencies, and truck owners and operators. In addition, Volpe studied successful truck management and security practices in other cities in the United States, Canada, and Europe.

The results of this research are presented in this study, divided into sections as follows:

- An analysis of existing trucking conditions in the District, including traffic volumes, crash data, truck restrictions, and important de facto truck routes.
- Research on successful strategies for motor carrier management, based on the experiences of other cities in the United States, Canada, and Europe.
- A review of the needs and concerns of businesses and truck owners and operators.
- A review of community concerns including an anecdotal overview of neighborhood-level truck issues.
- A review of the concerns of government agencies at various levels, including administrations within DDOT, other District government agencies, and Federal Government agencies.
- An analysis of security issues relating to truck traffic, focusing on potential threats posed by large trucks and on counter-terrorism strategies.

- A pilot truck parking study intended to better understand the nature and extent of truck parking problems.
- Recommendations for the creation of a truck management program for the District. The two most significant recommendations are the creation of a Motor Carrier Office within DDOT that will serve as a one-stop-shop for all truck-related issues, and the implementation of new traffic regulations designed to:
  - keep the largest trucks on main arterials,
  - keep all trucks off residential streets unless necessary to reach the truck's destination, and
  - keep unauthorized trucks out of highly congested and high risk security areas.

ES.3 EXISTING CONDITIONS

Traffic Conditions

Trucks constitute about 5 percent of total vehicle traffic in the District. This is small compared to the 10-15 percent of traffic represented by trucks in most major cities in the United States. Truck traffic bound for the District originates primarily in Maryland east of the District. Many trucks enter the District via Georgia and New York Avenues, where the majority of industrial activity and goods warehousing is concentrated. These two streets carry high volumes of truck traffic. Trucks constitute approximately 15 percent of traffic on Georgia Avenue and about 12 percent of traffic on New York Avenue.

Small trucks such as courier vans and pickup trucks dominate truck traffic in the District. Almost 90 percent of the truck traffic in the downtown area consists of these smaller trucks. The most significant problem with these smaller vehicles is the lack of parking spaces for loading and unloading. Large tractor-trailers constitute approximately 10 percent of truck traffic on the corridors with significant truck traffic. They constitute only about 5 percent of truck traffic in the downtown area.

With its current development boom, construction-related truck traffic has become an increasing concern for city residents. Construction-related vehicles frequently have to travel through residential neighborhoods to get to and from construction sites, creating air and noise pollution and vibrations on these streets, disturbing their residents.

Much of the truck traffic operating within the boundaries of the District comes in from Maryland and Virginia, destined for transfer points in the city. Many of these goods are ultimately delivered to businesses in the downtown area. While there are no officially designated truck routes in the city, there are many de facto truck routes that drivers prefer because of roadway geometry, traffic conditions, and location relative to trip origins and destinations. Passenger vehicles are also heavy users of the de facto truck routes, leading to congestion for both passenger vehicles and trucks.

DDOT has enacted truck restrictions in the District based primarily on complaints from residents about too much truck traffic on their streets. These restrictions alleviate problems in specific locations. However, they have also created a patchwork of restrictions around which trucks must maneuver. Furthermore, there is a set of roadways that cross the borders with Maryland and Virginia for which differing truck restrictions

exist on either side. These "border mismatches" feed in to the already unsystematic set of truck restrictions.

Parking Conditions

The lack of parking spaces for truck loading and unloading is a consistent theme throughout this study. To better understand this problem, Volpe conducted a pilot parking study in the downtown area. Volpe observed truck parking behavior and recorded such things as the total number of truck parking violations, time spent loading or unloading trucks, time of day of truck arrival, and existing parking regulations in the area.

One of the primary findings of this pilot study was that the times of day that parking spaces are reserved for loading zones only—usually during the peak periods—does not coincide with the highest demand for loading and unloading spaces. The information from this pilot study can be used to create improved parking policy in the pilot study area and in other parts of the city.

ES.4 SUCCESSFUL PRACTICES

Volpe staff researched truck management practices from other cities to inform truck management recommendations for the District. While no single location offers an example of a holistic truck management program, each location has developed strengths in particular areas such as congestion alleviation, curbside management, and truck routing. An analysis of the 11 case studies generated the following themes as important to proper truck management:

- Education and outreach
- Enforcement
- Innovation and technology
- Interagency coordination
- Investments in infrastructure
- Public-private partnerships
- Regional cooperation
- Regulations and incentives

ES.5 INDUSTRY STAKEHOLDER ANALYSIS

To understand the needs of District truck operators and their customers, Volpe interviewed representatives from 20 truck-related businesses and organizations, including truck operators, recipients of truck deliveries, and industry interest group representatives. Interviewees were promised anonymity in exchange for candid responses. Following is a list of the types of industry organizations that participated in this study:

- Business Improvement Districts
- Chamber of Commerce
- Conference facilities
- Construction companies
- Department stores

- Food and liquor distributors
- Grocery stores
- Linen services
- Parcel and overnight delivery services
- Restaurants
- Trade groups
- Utility companies

These interviews focused on the truck-related problems that businesses and truck operators encounter in the District. Interviewees cited the following concerns:

- Lack of loading zones and parking spaces
- Truck restrictions that affect travel routes
- Traffic congestion in the District and in the surrounding metropolitan area
- Safety of drivers, vehicles, and freight from petty crime
- Security-related closures and restrictions around the U.S. Capitol and White House
- Poor roadway conditions and signage on District roads, particularly New York Avenue and Interstate 295
- Confusion over rules and restrictions

ES.6 COMMUNITY AND INSTITUTIONAL STAKEHOLDER ANALYSIS

To understand the issues and concerns of residents and organizations acting on their behalf, Volpe staff interviewed employees of local, regional, and Federal Government agencies dealing with transportation, planning, land use, economic development, and public safety. They also conducted meetings with the chairpersons of Advisory Neighborhood Commissions (ANCs).and provided them with a questionnaire about truck-related issues in their area. Additionally, a DDOT planner from each of the District's eight wards accompanied Volpe on a ward "drive-through" to highlight major truck issues and locations of concern to residents. These tours were anecdotal, and were not intended to be exhaustive of all neighborhoods nor of all residents. Nonetheless, they helped identify major truck issues in residential neighborhoods and their effects on residents.

The major concerns of residents and the government organizations that represent them are:

- Double-parking/loading zone problems
- Insufficient enforcement of truck regulations
- Border restriction mismatches
- High truck traffic volumes
- Speeding
- Construction-related noise and vibration
- Noise from garbage trucks, especially during early morning hours
- Problem intersections
- Truck traffic in residential neighborhoods

- Administrative complexity of truck-related matters
- Inadequate infrastructure maintenance
- Lack of regional coordination

ES.7 SECURITY

The number of agencies involved in truck security in the District is large and diffuse. The Federal Government alone has 32 law enforcement agencies in the District. There is an advantage to having a variety of different security systems because if one system is compromised, it does not jeopardize the security in every other area. However, the tradeoff is that truck operators wanting access to sensitive areas may need to go through a variety of security procedures imposed by agencies such as the U.S. Capitol Police and the Secret Service.

Volpe sought input from a variety of these agencies to assess current truck-related security procedures and regulations, and to gain insight into policy changes that would improve security in the District without unduly affecting businesses, truck operators, employees, or residents of the affected areas.

The following security-related themes emerged from interviews with these and other stakeholders:

- Additional training is needed so that motor carrier safety enforcement personnel can better recognize security threats.
- Additional resources are needed to implement security measures.
- Agencies should investigate the use of technologies such as automatic vehicle locators and load scanners.
- Security-related closures add time and expense to deliveries.
- There is inadequate outreach to truck operators about security restrictions and, in particular, evacuation routes.
- The Federal Government and the District government—especially DDOT and the Metropolitan Police Department (MPD)—need to better coordinate security procedures related to truck traffic.

Some measures that can be explored to improve truck-related security are:

- Restricting trucks from especially sensitive areas except with special permission.
- Educating truck operators and the general public to recognize suspicious truck activity.
- Enacting "trusted driver" programs that allow only prescreened drivers in sensitive areas.
- Various Intelligent Transportation Systems/Commercial Vehicle Operations (ITS/CVO) technologies such as those proposed in DDOT's draft *ITS/CVO Business Plan*.
- Demonstration projects testing new technologies for identifying and screening commercial vehicles.
- Creating zones with different security measures depending on the attractiveness of targets to terrorists and vulnerabilities within the zone.

ES.8 RECOMMENDATIONS

This study makes two major recommendations:

- Create a single, exclusive office in DDOT to:
  - coordinate all motor carrier transactions within the District,
  - be the single point of contact for stakeholders—residents, businesses, truck operators, and others—with transactions or concerns related to motor carriers, and
  - provide expertise to other government agencies regarding trucking in the city.
- Develop a set of truck routes to:
  - keep unnecessary truck traffic off residential streets,
  - ensure that trucks use only roadways with adequate geometry and pavement condition to accommodate large and heavy vehicles, and
  - improve security by barring large trucks from sensitive areas of the city, especially around the National Mall.

The proposed truck route system would have three categories of roadways:

- *Preferred truck routes* are major arterials with high truck traffic, near major truck destinations such as transfer centers, and that provide adequate geometry to accommodate trucks. Trucks up to 80,000 pounds would be allowed on these roadways at all times of the day, with the possibility of issuing special permits for overweight or oversize vehicles.
- *Restricted roadways* are located in the area surrounding the U.S. Capitol and the White House. In addition to being an area with unique security concerns, this area also has severe traffic congestion and high pedestrian volumes. The restricted zone would allow trucks with 2 axles and 6 tires and smaller at all hours. Vehicles with more than 2 axles or 6 tires would be prohibited from operating in this area during the business day (7 AM to 6 PM Monday through Friday).
- *Prohibited roadways* are all other streets within the District—streets not designated as a preferred truck route and not located within the restricted zone. Trucks would be banned from these streets unless use of the roadway is necessary for the truck to reach its destination.

DDOT will have a streamlined permitting process that will allow trucks to operate on restricted or prohibited roads when necessary. Permits may be issued on a long-term basis for carriers or vehicles that consistently need to operate outside the new regulations. They may also be issued for short term use, as in the case of construction vehicles, or for one-time trips.

Other recommendations include:

- Facilitate institutional transparency, coordination, and leadership
  - Form a multi-stakeholder committee to address motor carrier issues in the District.
  - Investigate becoming part of the International Fuel Tax Agreement, which would provide revenue to the District based on the number of truck-miles traveled within the city.

    - Provide education and outreach to stakeholders so that they know truck-related traffic and parking rules, and so that they know whom to contact for transactions or concerns regarding trucks.
    - Unite parking policy and enforcement under the same administrative unit within DDOT.
- Define and rationalize routes, restriction, and enforcement
    - Work with MPD and Federal Motor Carrier Safety Administration (FMCSA), District of Columbia Division to increase truck safety and weight inspections.
    - Increase fines for traffic, safety, weight, and size violations.
    - Post signs indicating truck routes and truck restrictions.
    - Create a permitting process for trucks to use otherwise restricted roadways when necessary.
    - Work with authorities in Maryland and Virginia to resolve border mismatches in truck restrictions.
- Strengthen congestion management and coordination
    - Improve communication with truck operators to inform them of traffic incidents and lane closures.
    - Require a plan for managing truck traffic related to construction, including coordination among different construction projects.
    - Coordinate with neighboring jurisdictions and with the Metropolitan Washington Council of Governments (MWCOG) to develop regional solutions to truck-related congestion problems.
- Improve curbside management
    - Improve parking enforcement.
    - Increase fines for parking violations.
    - Extend loading zone hours past the morning peak period.
    - Improve signing for parking regulations.
    - Install parking meters in loading zones to encourage turnover.
    - Encourage nighttime deliveries in non-residential areas.
    - Require all new construction to have adequate facilities for off-street truck loading and unloading.
    - Discourage the loss of alleyways.
- Improve security measures
    - Implement a series of security zones centered on the National Mall area. The tightest security would be enacted around the White House and Capitol Building. Restrictions in this "red zone" might go as far as banning trucks entirely unless the vehicle has special permission to enter. Beyond the National Mall, truck-related security measures would be changed in accordance with the number of high-value targets in the area, and to allow reasonable access to streets and facilities located in each security zone.
    - Improve the District government's oversight of hazardous materials transport in the city.
    - Consult with Federal officials on further restrictions of vehicles carrying hazardous materials in the District if they do not have a destination in the city.
    - Explore the use of technology to address truck-related security issues.

- Appoint an official within DDOT to be in charge of truck-related security issues.

Prior to implementing these and other recommendations, DDOT should consider conducting cost-benefit analyses to determine which recommendations will yield the best results for the least cost. Further, each recommendation must be studied to determine whether it can be implemented by District regulation, or through the law-making process.